

## OUR FRONT AND BACK COVERS

The beautiful designs for our front and back covers were drawn by Mr. A. R. Valentine, an artist famous for his work in the Rookwood Potteries and in flowerpainting. He is at present engaged on a ten-year commission to paint the wild flowers, trees and ferns of California, and there will be in all about 1,300 paintings in the set.

The flowers are keyed as follows: On front cover: No. r, the soft rose-flushed white, double tulip, Murillo. No. 3, terra-cotta-colored early tulip, Thomas Moore.

On back cover: No. 1, the scarlet tulip, Gesneriana major, which has a deep blue center. No. 3, the late tulip, Picotee, white, flushed scarlet. No. 4, another late tulip, Parisian Yellow, one of the best of its color.

## The war in Europe has delayed bulb shipments from Holland, but probably October 15 will see them here.

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## BUSINESS TERMS

Cash. Unless otherwise arranged, money must accompany the order.
Remittances under \$I can be made in stamps; over that amount, Money Orders or Checks are preferred.

Postage, Expressage or Freight will be prepaid by me without cost to customer. Where there are express offices, I generally ship by express.

Safe Carriage Guaranteed. I guarantee that bulbs shall reach my customers in good order, and shall be of good quality. If they are not, the money will be refunded; but claims for damages must be made immediately upon arrival of goods.

Quality of Bulbs. My bulbs are as good as can be bought in America. Many of them are grown at my gardens at "The Terraces." Others are bought in Holland, England and America, and of dealers whose reputations stand highest. I pay the price for quality and demand il. Ask my customers.

Date of Delivery. While some varieties are ready earlier than October, there is no advantage - but a positive disadvantage-in planting so early in the season. On our coast it is well to wait until slightly cooler weather, and for the first rains, if they are not long delayed. This means that October and November are the best planting months. I have better facilities for keeping bulbs in good shape than my customers can have, and the shorter the interval between shipping and planting the better. Shipments will be made about October 5 to ro, with the exception of some items which are not ripe at that time. I strongly advise against planting later than January i, except where noted.

Substitutions. I never knowingly send a plant wrongly labeled; but, unless otherwise instructed, when a variety is out of stock I will give better than its value in the nearest thing to it.

Order Early. Orders will be filled in the order of receipt. You may find certain varieties sold out if your order is too long delayed.

Large Quantities can be supplied at reduced rates. Send list of requirements.
My gardens, "The Terraces," have a favorable climate, an abundance of water, and a wide variety of soil, all combining to make an ideal garden spot. From the scenic standpoint it is probably the most unique garden in the world. By all means come to see it if you can. Let me know in advance when you will be here.

## Bulbs for California Gardens

The Anemones and Ranunculus are among the brightest of the spring bulbous plants and are most excellent as cut-flowers. They are both single and double, and are in almost all colors. During my journeys about San Francisco Bay during their flowering season 1 have seen them thriving admirably everywhere, and am impelled to offer finer varicties and a larger assortment by that fact.

They thrive best in a loose, light soil, well enriched with finely rotted manure, yet they seem to do well in the prevailing adobes. They should be planted to the depth of 2 inches, from October on, and can be planted even into mid-February. I light mulch of well-rotted manure is an advantage, placed when the bulbs are planted.

Either Anemones or Ranunculus are rather pretty alternated with tulips, and form a very good ground-carpet for the latter. In either case 3 to 4 inches apart is the best planting distance. It is not necessary to dig or reset the beds every year, and the beds can be planted over after they ripen.

## ANEMONES in Named Varieties, or Mixed

1 supply Mixed Anemones, single or double, for 25 cts . per doz., or $\$ 1.25$ per 100 .
Double varicties: White Ceres; Couleur de Sang, blood-red; King of the Blues, blue; Lord Peel, dark blue; and King of the Scarlets, at 40 cts. per doz., $\$ 3$ per 100.

Single Ancmones, Bride, for white, True Blue for blue, Scarlet Brilliant for scarlet, Proserpine for pale purple, Maria Cornelia, white with blue center, are all fine. 30 cts . per doz., $\$ 2.50$ per 100 .

Anemone fulgens is the scarlet Windflower, a most brilliant flower and ahways a fivorite. Fine roots, 30 cts . per doz. Double Fulgens, the same price.

For Anemone Japonica, the fall Anemone, see my Hardy Plant Catalogue

## RANUNCULUS

There are several distinct classes, and I offer either Persian, French or Turbans, mixed, at 15 cts. per doz., or $\$ 1$ per 100 . All are lovely and distinctly charming.

I also offer in Persian Ranunculus, A. Courvet, red with green heart; Jaune Supreme, yellow; Orange Brilliant, orange.

In French Ranunculus, Queen of the Netherlands, black; Brutus, palc yellow; Crimson King, crimson; Emperor of China, grolden yellow; Vesuvius, brilliant scarlet.

In Turbans, Black Grootvoorst, black; Hercules, white; Romano, scarlet; Merveilleuse, yellow. All my named varieties are 25 cts . per doz., and $\mathrm{S}_{2}$ per 100 .


A planting of Mixed Anemones, with Doronicums. (Listed on pates 5 and 12 of my Hardy Plant Cataloguc)

## HYACINTHS

No winter-flowering bulbs are more esteemed than these beautiful things, which combine a wax-like texture with clear colors and exquisite fragrance. They can be grown out-of-doors here if the bed is shaded a part of the day, and for this purpose the cheap bulbs, merely to color, are quite good enough. They should be planted about 6 inches apart each way.

For flowering in pots the second-size bulbs produce most excellent flowers, and are as good as most growers sell, but if very fine flowers are wanted the first-size bulbs are the best. All Hyacinth bulbs are especially grown for forcing. They never do so well the second year, and if grown in pots are useless for another year. New bulbs should be bought every fall.

For indoor blooming the bulbs should be potted in early fall. A compost of two parts loam, one part sand and one part well-rootted manure is the ideal soil. Usually three bulbs are put in 6 -inch pots, first putting in some pieces of broken stones to insure drainage. The bulbs should be set so that the tips are just above the soil after potting. Water thoroughly and set


Hyacinth L'Innocence in a cool, dark place for six or seven weeks until the bulbs are well rooted. Do not bring the bulbs into the full sunlight at first, but let them come on slowly in a shaded window. By potting the bulbs at intervals of two or three weeks, and using care in bringing them into the light, you can have a succession of bloom for several weeks. Possibly no other flowers give as much real pleasure as potted bulbs.

For pot culture I offer very fine named bulbs in two grades. The seconds are as good as most dealers sell, while the firsts are fancy. Because double Hyacinths are not nearly so satisfactory, I offer only singles. First-size bulbs, 15 cts. each, $\$_{1.50}$ per doz. All are in varieties with extra-large trusses.

In pure white I have Angina Christina and L'Innocence, which are among the finest sorts and varying a little in habit.

Plimsol is slightly blush-pink; Gigantea is clear blush-pink.

King of the Blues is a dark blue, and Grand Maitre is a clear por-celain-blue, while Johan is a light blue.

Robert Steiger is deep crimson.

## Smaller and Cheaper Hyacinths for Planting in Beds

These are really very satisfactory and produce quite nice flowers. They are not named, but colors are separate-white, rose, red, blue, yellow, and all shades. These are cheap at 50 cts. per doz., $\$ 4$ per roo. Plant as you would tulips.

## TULIPS

All the Tulips are very showy, and it is worth much trouble to have them at their best. In pots they can be had by midwinter, while in beds they are at their best from March to May. The methods of culture used in the East and Europe are not adapted to California, and will seldom produce good results; but, by studying the peculiarities of our climate, very fine flowers can be grown with but little trouble.

## Culture of Tulips in California

Situation of the Bed. If the bed is exposed to the sun the bulbs will be forced into a premature bloom with very short stems. To guard against this, choose a situation which is shaded at least one-third of the day,-half the day is better. The northeastern or northwestern corner of a building is best, but trees will give the same shelter. The bed must not be where sharp winds reach it.

Soil. Tulips prefer a light, well-drained soil, but can be grown well in any soil that is not mucky. If the soil is heavy, it should be underdrained with tiles, gravel or any other porous conductor, and the surface


Keizerkroon Tulip should be raised 6 inches.

Manure should be used. Well-rotted cow-manure is best. It may be spread on the surface an inch thick and dug in; or, better yet, applied as in mulching. Where soil is heavy a light coat of air-slaked lime is most excellent. It can be put on a half-inch deep and spaded in, and it will both sweeten and mellow the soil.

Distance Apart and Depth to Plant. Tulips will do well when planted 3 inches apart each way, or sixteen to the square foot. The standard distance is 4 inches apart each way, or nine to the square foot. It is a waste of space to give them more.

Fancy Beds are to be avoided. They are fit only for open spaces, and in California it is foolish to attempt them. A bed 3 to 4 feet wide, in the best situation, is much better. Plant in wide variety so as to prolong the season, and aim to have fine flowers, for cutting rather than a mass effect.

Shade. The best shade is one that is continually shifting so that the beds are in the sun a while and the shade for a time. This is obtained best in the shadows of trees which are not closely planted, or often still better in the outer shade of deciduous trees which are not too dense, and where the light plays and changes.

Mulching. A mulch of rotted manure put on in the spring before the Tulips are through the ground is a most excellent thing. It keeps the ground from being packed and holds moisture to the top. It should be spread neatly over the bed.

Plant Early. Mid-October is the best time, November about as good; but further delay will be at the expense of the flowers. By no means plant later than January r , or earlier than October.

Method of Planting. The best method is that used in the great fields in Holland. First, thoroughly spade and pulverize the soil and give drainage if it is needed. Then throw out the soil from a section of the bed to the depth of 7 inches. Put in a layer

## TULIPS, continued

of manure an inch deep and cover with an inch and a half of soil. Set your bulbs 3 or 4 inches apart each way, and then cover them gently with top soil. Proceed in this way until the bed is planted, and then level with the remaining soil. As the bulbs are about 2 inches high, this will give them a cover of about 3 inches of soil. Do not use any manure that has not gone through the first heating. In cold soils, plant an inch shallower. If the soil is heavy, put some starp sand around the bulbs.

Watering. During the winter and early spring, give only enough water to keep the bed moist; usually the rain is ample. As soon as flower-buds appear, water liberally until a few weeks after the flowering is over and then dry them off.

Digging the Bulbs when Ripe. A Tulip bulb is ripe when the leaves turn yellow. There is no need to wait until they are entirely dry. Late Tulips can be left in the ground from year to year, yet this is not the best practice, as they form many offsets and soon become crowded. Then the roots of trees and shrubs are apt to encroach on the bed, and annual planting allows one to cut them out. Still again the soil must be annually enriched if the best results are to be had, and cultivation to a good depth is a distinct advantage.

Method of Storing. All that is needed is to put the bulbs in bags or boxes in a dry place, and leave them there until proper planting time.

Gophers. Like the poor, they are always with us, and they like Tulips. In my gardens, with a frontage of a mile, we control them by trapping. It is hard to poison them in a garden because there is so much good food, and they store away the greater part of what they take. Some soft food, like carrots, parsnips, green corn or raisins, with strychnine, is the best method of poisoning.

Gopher Fences. Here is a cheap way of fencing them out. Use wire mesh described in catalogues as $1 / 2$-inch-mesh poultry fence, 30 inches high. A ditch 30 inches deep is dug, the netting stood upright in it, and the soil then worked down on both sides and packed. A gopher very seldom goes below this depth, or runs along the top of the ground. For most purposes the gopher fence answers well.

Tulips in Boxes. If gophers are numerous, the bulbs can be planted in boxes 8 inches deep, with soil as indicated. The boxes should be watered liberally, even in winter.

Tulips in Pots for Winter


Shandon Bells and Golden Crown Tulips Bloom. The best time to pot is in early fall. The best soil for potting is a compost of two parts of garden loam to one part of well-rotted cow manure, and one part of sharp sand. Use 5 - or 6 -inch pots, and first put in some broken pieces of crock with a little loose material to insure good drainage. For a 5 -inch pot, use three to five bulbs, and for a 6 -inch pot, four to seven. Plant so that the tip of the bulb projects, and water moderately. Put in a cool, dark place for five or six weeks until they are well rooted. This can be told by gently striking the side of the pot until the soil will slip out. If the pot is filled with a mass of roots, the bulbs are ready to bring to the light. Water moderately, and do not give full sunlight, but let them come on slowly in a window or cool greenhouse. If brought into a warm room, the blooms will not open well.

The Best Varieties to Pot. Any early single Tulip will do. Chrysolora, Cottage Maid and Keizerkroon are especially fine. Late Tulips seldom do well in pots.

## EARLY SINGLE TULIPS

With proper regard for shade and position, I certainly recommend planting Early Tulips out-of-doors. I usually alternate groups of these with Late Tulips and Darwin Tulips, and thus have a pretty show for a much longer time.

In the East they grow these by the millions in open ground and make a wonderful show with them. In California we can grow them quite as well in pots, but they will be failures in the open ground, and to succeed must be shaded as indicated on page 3 .

The groups may be of from twelve to as high as 150 of a sort, and can be planted close together, as they do not flower at the same time. The foliage of one sets off the others. Well planned, such a bed is very satisfactory.

Any of the following varieties will do for this, and in the Bay cities either the east or west side of a house or the same situation as regards trees will answer.

The varieties that I offer are among the tallest of this class, and are all well adapted to pot culture (see bottom of preceding page).

For forcing and pot culture these are the only Tulips to use.
YELLOWS: Chrysolora is a large flower, not very long-stemmed, and one of the favorites for potting. The price is 3 cts . each, 30 cts . per doz., $\$ 2$ per 100 .

WHITES: White Swan is so tall as almost to suggest a late Tulip, and lasts a long time. Prices same as above.

REDS AND SCARLETS: Sparkler, or Cramoisi Brillant, fairly dazzles the eye with its orange-scarlet flowers poised on long stems; Crimson King is scarlet, but tending more to glowing red, and wonderful in its intense colors. The price is 4 cts. each, 40 cts . per doz., $\$ 3$ per 100 .

YELLOWS AND REDS: A favorite in these colors is Keizerkroon, whose picture on page 3 makes it outsell any other early Tulip that I offer. Look at the picture, and fancy the glowing crim-son-scarlet center in striking contrast to the bright yellow rim. It is large, also, and one of the best potting Tu lips. Keizerkroon is 4 cts . each, 35 cts. per doz., $\$ 2.50$ per 100. Cottage Maid is a lovely rose-flushed white, and one of the favorites for potting. The price is 3 cts . each, 25 cts . per doz., $\$ 2$ per 100.
TERRA-COTTA: Thomas Moore is a handsome flower. The color is fine terra-cotta, flushed with gold; it pleases everyone. Price 3 cts. each, 30 cts. per doz., \$2 per 100 . Sce No. 3 , front cover.

## A Fine Collection of Early Single Tulips

For $\$_{2}$ I will send a collection of 100 Tulips, selected by me from above sets, giving ten each, all separately labeled. This will give a fine variety of color and form.



## DOUBLE EARLY TULIPS

There are many Double Early Tulips, and while I have little use for most of them, Murillo is too good to pass by. It is a double Cottage Maid in soft rose-flushed white. The flowers suggest pondlilies. Either in pots or in the garden it is charming, and it is very decorative when picked. 4 c . each, 40 cts . per doz., $\$ 3$ per 100 . See No. i, front cover. Vuurbaak is red, a wonderful shade, and one of the best of this color; price, 7 cts . each, 75 cts , per doz.

## PARROT TULIPS

This is a race of gorgeously colored Tulips, with very large flowers fancifully cut and slashed in the oddest way. They have short stems, and must be grown here like early single Tulipswith considerable light shade. Can be forced late without heat, and are specially valuable as potted plants. Mixed bulbs, all colors, 3 cts . each, 30 cts . per doz., $\$ 2.25$ per 100.

## Parrot Tulips

## MAY-FLOWERING

or

## COTTAGE TULIPS

These splendid, long-stemmed Tulips, and the equally tall Darwins and their cousins, the Rembrandts, are late-flowering classes well adapted to California conditions. When a few points are carefully observed, they can be grown in wonderful perfection. In exceptional springs they do well in the open sun,such a spring as that of igir; but more often hot days come carly, and a light shade is essential to get all of the beauty they are capable of producing.

If you are growing the Cottage Tulips for cut-flowers rather than for a mass of color, and the bed is large, the best possible shade is a frame-work with movable laths. Next to that is the shade of deciduous trees which are in leaf at Tulip-time.


Double Tulips


Planting of Single Tulips

## MAY-FLOWERING TULIPS, continued

Apples or other fruit trees are particularly good. Or a bed can be so planted that it gets intervals of sunshine at different times during the day, and the shadows of any sort of trees or of buildings at intervals. The shade of a house well answers, and the bed may be either on the east or west side, but not north or south of a building; a situation where the shade of a building covers the bed at some time of the day, but leaves sun earlier or later, is an excellent arrangement.

Again, if we would have the best, we must water liberally when the buds first show and until the flowers fade. I do not mean simply holding the hose on them a few minutes each evening, wetting the surface and leaving the under-soil half dry; but, at intervals of a few days, giving good soakings. I have found a mulch of halfrotted manure, put on before the Tulips come through the ground, a most excellent thing. When I want the finest flowers, I dissolve nitrate of soda to make a saturated solution and dilute it to one-quarter strength. This I sprinkle on the soil every few days as the buds swell, and wash in with pure water. Not all of this trouble is necessary to have good flowers, but the observance of each point improves them.

All late Tulips can be planted in the borders with perennials or low shrubs, if their situation is carefully marked so that they will not be dug into. But the best arrangement is to plant in beds 3 to 4 feet wide, and to lift, when ripe, each season.

## COLLECTION OF LATE TULIPS

The ten sorts in this collection are excellent varieties, the value given is most satisfactory, and I am happy to say that my customers have realized this and bought this collection mostl iberally. One hundred bulbs, my selection, $\$ 2.25$; fifty bulbs, $\$ 1.25$.

In REDS and SCARLETS I offer Gesneriana major, which is really the very best of all Late Tulips. The color is a glowing scarlet, with a bluc-black eye, and the stems are

## MAY-FLOWERING TULIPS, continued

often 22 inches high. (See No. 1, on back cover.) Fulgens is clear deep red, with pointed petals, and it will be just as much of a favorite when it is better known.

Gorgeous is the only word for La Merveille (The Marvel); first orange-red and then a rare shade of red. Similar in color, but more like Major in habit, is Gesneriana aurantiaca, the orange Gesneriana, a grand flower; and Macrospeila, another form of Gesneriana, is deep blood-red, with showy black eye; in the sun no Tulip outshines it. The price of all these splendid Tulips is 3 cts. each, 30 cts. per doz., $\$ 2.25$ per 100.

YELLOWS: In yellows I offer three fine varieties. Parisian Yellow (see No. 4 , back cover) is perhaps the best yellow, and its price is 4 cts . each, 40 cts . per doz., $\$ 2.75$ per 100. Bouton d'Or is golden, tall, stiff-stemmed, and makes a fine color-mass when cut, although smaller-flowered than the others. It is cheap at 3 cts . each, 25 c . per doz., $\$ 2$ per roo. Retroflexa is a light canary-yellow, long-stemmed, large-flowered, and with reflexed petals. 4 cts. each, 40 cts . per doz., $\$ 3$ per 100.

SCARLET AND GOLD: The preceding Tulips have all been in solid colors. Golden Crown, with a body of rich yellow, penciled with scarlet, finally becomes a sort of old-gold throughout.


Le Reve Tulips

Dwarf. I
 doz., \$2 er 100.

WHITE AND PINK: Still pretticr is Picotee, which opens light cream, lightly penciled with pink, and becomes pure white suffused throughout with pink. 3 cts. each, 30 cts . per doz., $\$ 2$ per roo. (See No. 3, back cover.)

## SPECIAL LATE TULIPS

Le Reve is a most exquisite large-flowered sort of a shade of pink, tinged salmon; 10 cts. each, 75 cts . per doz. Inglescombe Scarlet and Inglescombe Pink are large-flowered and in such vivid colors as to attract attention wherever planted. 8 cts. each, 75 cts . per doz.

## GIANT DARWINS

The Darwin Tulips are May-flowering Tulips, but in a class by themselves. They used to be called Breeders, and were badly neglected; but the wonderfully fine varieties brought out during the last fifteen years have pushed them to a front place. With broad cups of large size, on stout and very tall stems (some are 30 inches high), they have great lasting qualities, and whether in beds or vases they always attract attention.

## GIANT DARWIN TULIPS, continued

At first the cup is incurved, but day by day it becomes broader until the petals spread out flat and are as much as ro inches across. The colors are simply wonderful in variety.

Special Culture. The directions given for May-flowering Tulips must be followed carefully if it is desired to have such grand flowers as Darwins are capable of giving. The shade, the abundant watering when flowering, and the added fertilizers are necessary. I supply exceptionally fine bulbs, but my customers must coöperate by giving the care.

## NAMED DARWIN TULIPS

Such has been the demand for Darwin Tulips throughout the world for the last few years that all Dutch dealers have increased their prices for the bulbs, necessitating a corresponding increase by retailers. In the set of Darwin Tulips that I offer, every one is tall, with large flowers of fine shape, and superb coloring. The most expensive varieties to be found in other catalogues are no finer. I have a very large collection of other varieties; but the ordinary planter would not care for a larger number than herein offered.

In soft pink, Calliope at 60 cts . per doz., and Clara Butt, the best rose-pink known, at 75 cts. per doz. In a light blush-pink, Gretchen, also known as Margaret, at 60 cts . per doz.

In brilliant rose, Gustave Dore
 and Laurentia, a superb variety in rosy orange, are 60 cts . per doz.
Glory is a very large Tulip in glowing scarlet; 75 cts . per doz.

Pride of Haarlem, one of the largest of all Tulips, is glowing rosy carmine; 75 cts , per doz. In rich, deep red, King Harold is so deep that it approaches black; 60 cts . per doz.

Bartigon is a very large, deep red nower; 75 cts. per doz.
In black-red, Von Jehring is very showy. In a rich, reddish lilac, Palissa is especially showy. These two at 60 cts . per doz.

Rev. H. Ewbank is a lovely heliotropelilac; 75 cts . per doz.

Varieties priced at 60 cts . per doz. are sold at $\$_{4}$ per ioo. Those priced at 75 cts . per doz. are offered at $\$ 5.50$ per 100 .

## Superb Collections of Fine Named Darwin Tulips

My grower in Holland puts up very fine collections of Named Darwin Tulips. He gives a wide range of colors, very fine varicties, and large bulbs. Better value cannot be given for the money. Bought separately, they would cost far more. io very fine sorts, roc. each, or 100 bulbs for $\$ 3$. One of each sort, not named, ro bulbs, 35 cts. Five of each variety, or 50 bulbs, \$I. 75 .

## Valuable Mixture Collections That Are Full of Surprises

In my garden, with its wonderful collection covering all sorts of Tulips and fully three hundred varicties, some get into mixtures every year. Among these are many of the very finest, some sorts that are worth ten cents each and more. I will give a general mixture at $\$$ r. 50 per 100 . This will be full of surprises.

DARWIN MIXTURES. Even greater value, for in a hundred bulbs there may be twenty sorts. They are surely fine, and at $\$ 2.25$ per 100 are very cheap.

## DAFFODILS

You couldn't possibly plant too many of these splendid spring-flowering bulbs. They are perfectly hardy, are as easily grown as onions or turnips, need hardly any watering, no care after they have flowered, and are not troubled by rats or gophers. They give a liberal bloom when flowers are most prized, in early spring, and for cutflowers are unexcelled. Plant a few dozen, if you can do no more; hundreds if you can, and, if your purse will allow you, plant beds of thousands. Rest assured that you can buy no spring-blooming bulbs which will give greater satisfaction. I grow many Daffodils, and my customers say that they cannot get better ones elsewhere. My entire assortment was selected with the aid of the first Daffodil-growers of the world, and even then I have dropped many varieties that I have tested.

## Culture of Daffodils

In California, Daffodils will grow in any soil. The soil which best suits them is a rich loam with abundant moisture during the winter and which gets dry in the summer. Dig the ground up decply and thoroughly, and then let it settle a few weeks before planting. Do not use fresh stablemanure. The best fertilizer available here in California is crushed bone (commonly called "bone meal"), at the rate of one and one-half ounces to the square yard. With this sulphate of potash can be used at the rate of threc-fourths ounce per square yard. Daffodils are especially fond of lime, and a sprinkling of quicklime on the soil before it is dug is of advantage.

Planting and Lifting. The best time to plant is with the first rains, although little difference will be noticed in planting up to November I. After that date the bulbs lose by being kept out of the ground. The bulbs may be left undisturbed for years, but it is better to lift them and reset every second year, and, with the exception of the various forms of Pocticus, there is some gain in lifting every year and replanting at once. The bulbs produce offsets, and become too crowded in three years to do well. Plant the Pocticus varicties with liberal space, and do not move until crowding makes it necessary.

Depth to Plant. The average depth to plant is from 2 to 3 inches. Better less than more. A safe rule is to cover one and a half times their height.

Shade. All Daffodils prefer light shade. In California we should select a cool situation if the soil is light, and much finer and longer stems will be had when they are shaded from onefourth to one-half the day. This does not mean that the bulbs will

## DAFFODILS, continued

not thrive quite as well in sun as in shade. Excellent results can be had by planting Daffodils in groups among shrubs or hardy perennials.

Watering. Dafiodils like much water when growing. If the ground is kept almost wet until after blooming time, they will be all the better. Some varieties will grow well on the banks of streams or ponds.

When to Dig. If the leaves are cut from Daffodils while they are still green, it injures the bulbs. After they have flowered they should be left alone for from six to eight weeks, when the leaves will turn yellow. They are then ripe enough to dig, if it is desired to plant other bulbs in the same space. When dug they should first be well dried in a cool, airy place, and then stored in a dry place until time to replant comes.

I consider the long lines of Daffodils that we so often find along paths in gardens a bad garden mistake. It necessitates having a ragged border for too long a period after flowering. It is much better
 to plant the bulbs in bold groups at least 4 feet from the edge, as that would allow room for plants which will make the garden interesting before Daffodil time, and which can easily be so arranged as to grow up and conceal the dying foliage as it ripens and the bare ground later. A good arrangement is a bright border of aubrietias which flower all winter, with such plants as arabis and pansies back of them, and good groups of strong perennials still farther back and interspersed among the masses of Daffodils.

## NARCISSI, DAFFODILS, JONQUILS

The difference between Narcissi, Daffodils and Jonquils is this: Narcissus is the botanical name of all of the plants of this group, whether they have large flowers with trumpets like Emperor and Golden Spur, small flowers like the l'oeticus, or two or more flowers on a stem as in the Jonquils, the Chinese Lilies and their European sisters. All are Narcissi, alike. A Daffodil is a Narcissus with a single flower on a stem, whether with large or small trumpet; Jonquils are Narcissi with two or three shallow, cupped flowers of a pleasing yellow, and quite fragrant. The Jonquil comes from juncus, or rushes, because the leaves resemble that plant. Polyanthus Narcissi are all of the sorts which, like the Chinese Sacred Lily, have the flowers in bunches. The Polyanthus class is the most common of the family, and probably the most variable; they are not so hardy as the others, and need a little more attention-but they are worth it.

## DAFFODILS WITH LONG TRUMPETS

These are the great favorites among Daffodils, and are grown in immense numbers, both in the garden and pots. All are fine as cut-flowers, and the first to come into flower is Golden Spur, the yellow Daffodil, a rich, solid yellow. Later comes Emperor, with a much larger flower, in a lighter but very pleasing yellow; while Empress (see picture above) is in two colors, the trumpet being yellow, perianth white. Victoria resembles Empress, but is made pleasingly distinct by a broader trumpet. All are among the fowers best worth growing, and at the same price for good bulbs- 5 cts , each, 50 cts . per doz., $\$ 3$ per 100 .

Of Emperor, and Golden Spur I have smaller bulbs, also solid and sure to


Sir Watkin Daffodils

## DAFFODILS WITH LONG TRUMPETS, continued

give fine flowers at $\$ 2$ per 100. At that price you can afford a good bed. These are the three sorts of which you want plenty.

Like a giant Golden Spur is Glory of Leyden, one of the largest of all Daffodils, and makes a glorious show. It is worth 15 cts. each, or $\$ 1.50$ per doz.

## DAFFODILS WITH CUP. SHAPED TRUMPETS

I am rather partial to these. With the exception of Sir Watkin, they lack the size of the previous section, but the stems are long, the flowers gracefully poised, and, to my liking, they make much better cut-flowers. There is no sameness in their forms. Each has some little individuality that endears it to you.

Barrii conspicutus, for instance, has a canary-yellow lower illuminated by a scarlet cup, and is very longstemmed. It lasts long and becomes almost white, and its great merit is its adaptability to naturalizing. Fine flowering bulbs, at 3 cts. each, 25 cts . per doz., \$1.50 per 100 .

Cynosure, too, is a good thing, and the flowers are light yellow, the cup just edged scarlet, making a brilliant combination. Its price is the same as the preceding variety.

Sir Watkin is in a class by itself. It is about as large as the giant long trumpets, and is a great, light yellow wheel. Some of the flowers are 5 inches across. It is also known as the "Welsh Giant," and can be had for 4 cts . each, 40 cts. per doz., $\$ 3$ per 100 , with smaller, but good bulbs at $\$_{2}$ per 100.

## DAFFODILS WITH CUP.SHAPED TRUMPETS, continued

When I want to send a friend Daffodils that I know will please, I send a good bunch of Mrs. Langtry. Somehow our Californians do not seem to have discovered this fine flower, which has every Daffodil virtue. The flowers are of cair size, and at first a rich creamy white, just tinted with gold. Later they become pure white. They are most beautifully formed and very lasting. They are very cheap at 3 cts . each, 25 cts . per doz., and $\$ 2$ per roo; if you wish a few thousands I will make them much less.

Katherine Spurrell can only be described as "exquisite." The rounded fower is pure white and of a delightful satiny texture. I know of no more lovely sort. 6 cts. each, 60 cts. per doz.

It has been the ambition of every Daffodil producer to breed an all-red flower, and C. J. Backhouse is as near as they have arrived. A little under size, the flower is deep yellow, suffused throughout with scarlet. The price is 4 cts . each, 40 cts . per doz.

## POET'S NARCISSI AND JONQUILS

Jonquils have three great merits: First, they are among the very earliest flowers to bloom and do well either potted or in the garden; and, next, they have a rich yellow color; and last, a very pleasing fragrance. They are flowers that everyone should have in hundreds, and the clumps can stay for years and will flower freely each year.

The largest-flowered of these is Rugulosus, which I sell for 25 cts . per doz. and $\$$ I. 50 per 100 .

Poeticus ornatus is my choice among the Poct's Narcissi. It is most charming with its pure white flower with scarlet cup. It is fragrant and early flowering, and, still better, it is among the surest of all bloomers. Few bulbs fail to give a llower, while many give two, or even three. My price for very fine bulbs is 2 cts. each, 20 cts. per doz., and $\$ 1.25$ per 100. I can supply smaller but excellent bulbs at $\$$ I per 100, and bulbs for naturalizing still cheaper.

The old Poet's Narcissus, known better now as Poeticus of the Gardens, is a very fine flower. The stems are stout and tall, the flowers large and very fragrant, and it is a late bloomer, coming after the main crop of Daffodils is gone. If it would only flower more reliably, it would be ideal; and, as it is, there is no Daffodil grown that is more esteemed and possibly none is better for either cutting or naturalizing. It needs a heavy soil and abundant moisture, and, if well grown, about 75 per cent of old bulbs flower. Large bulbs of the very best quality at 2 cts. each, 20 cts. per doz., \$1. 25 per 100 . Good bulbs at 2 cts . each, is cts. per doz., 75 cts, per 100.

## HYBRIDS AND IMPROVED

 SORTS of Poct's Narcissi are now offered and highly praised. I have grown some of the best, but fail to see the value.Poet's Narcissi are not at their best the first year. They get better with age. They are perfectly hardy, are among the very best for naturalizing, and nced not be disturbed until they begin to crowd.

## MIXED DAFFODILS

In a large garden bulbs will get mixed, and often the finest sorts are among the accidental mixtures. My Mixed Daffodils are a most unusual bargain at 30 cts. per doz., $\$ 1.50$ per 100, \$12.50 per $x, 000$.


Poet's Narcissi

## THE IRISES

## JAPANESE IRIS

Gloriously beautiful plants are Japanese Irises. At their best, stems 4 feet tall rise from a mass of grassy leaves, and bear at their tops flowers as much as a foot across. The colors are delicate, and the texture of the flowers is like silk.

These are my varieties: Apollo, pure white with pink center; Blue Danube double, deep indigo-blue, center violet shading to yellow; Frate, double, silvery white, veined and shaded with lilac, center deep lilac; Helen von Siebold, reddish purple with white veins and a yellow center; Oriole, double


Spanish Iris (see page ${ }^{15}$ ) rich plum-color shading deeper toward the center, and brightly marked with yellow; Pyramid, also double, lilac-blue, center of each petal shaded white; Robert Craig, a delicate French gray with violet veins, most charming; Topaz, single, reddish amaranth throughout; T. S. Ware, reddish violet, veined white, and white center with some lemon markings; Victor, white, veined violet-purple, pure violet-purple center.

I have them in mixture at 20 cts . each, or $\$ 1.50$ a dozen. Strong plants of named varieties at 25 cts . each, or $\$ 2$ a dozen.

Plants can be set out from August to March. Where plenty of water is available, September planting is the best. They do well on the edge of ponds, running streams or ditches, and will grow under several inches of water. IIeavy feeding and plenty of water are necessary.

On dry hills plant in rows $31 / 2$ feet across and a foot apart in the row; the plants about 3 inches above the trough between the rows. Give a dressing of nitrate of soda and bone meal when planting. Mulch with manure in spring. The ground should be kept well cultivated, and do not allow it to become hard or baked. The plants will grow in almost any soil, if it is made fairly rich, and the roots supplied with moisture during the summer. A garden cannot have too many of these splendid flowers; each year the clumps increase in size and become more valuable.

## GERMAN IRIS

The German Iris is one of the very best flowers that the garden can hold. Everybody knows the older sorts under the name of Flag Lilies, or Fleur-de-lis, but few know the lovely new sorts, either in dwarf or tall. In structure of flower and in the delicate colorings the Irises are rivals of the aristocratic orchids, but they can be grown successfully in the most humble garden. I have unnamed bulbs in white, blue or purple at 10 cts. each, $\$ \mathrm{x}$ per dozen and $\$ 5$ per roo. Or I will put up sets of twenty of the finest sorts, onc each, unnamed, for $\$ 2.50$ (with names, $\$ 4$ for the 20 ).

Purdy's Blue is a light blue, very sweet-scented sort and a fine thing. Price 20 cts . each. This Iris will grow in either dry or wet soils, sun or shade; yet, in rather good soils, with moderate moisture, it does its best. The bulbs should be reset about every third year, in August. Plant new bulbs before Christmas, at the latest.

Irises of the Pallida class are very tall plants, with stems often 4 feet high, and among the best of these is Odoratissima, almost the same as Princess Beatrice, at 25 cts . each. I have quite a number of this class in quantities too small to offer, and can make sets at 30 cts . each variety.

## MOURNING IRIS

The Mourning Iris, as Iris Susiana is called, is a bulbous Iris with large, bluish flowers veined with brown, and so odd as to attract attention wherever it is grown. The bulbs are handled dry, and must be planted before Christmas, if possible. I sell them at 20 cts . each, or $\$ 2$ per dozen.

## SPANISH IRIS

The large flowers have very clear coloring, and are borne at the top of long, stiff but slender stems. Few flowers combine more good points, either for cut-flowers or garden decoration, and luckily they are very cheap. The colors range from the darkest blue to pure white, clear yellow, and have many marvelous combinations of stripes and splashes of color. These Irises have been known in America for only about ten years.

Culture. They do best in a thoroughly worked light or fairly heavy loam, and indeed do better in adobe than in lighter soils. Plant about 3 inches deep and water freely until after flowering. Light shade helps, but dense shade is a detriment. They do not need to be lifted for several years, and they flower more freely each season.

I offer two mixtures: Trade Mixture-this is put up in Holland and is good. The bulbs are fair, and the varieties of an average; most of them are from the best named sorts, but the bulbs are not large size. Price, 15 cts. per doz., 75 cts . per $100, \$ 6$ per 1,000 .

Purdy's Superb Mixture. I make this up myself by using equal quantities of the finest named sorts. It saves me the trouble of labeling and wrapping a lot of parcels, and it gives you the finest quality at a lower rate. 20 cts . per doz., \$1 per roo, S9 per r,000.

## Named Spanish Iris

In these I buy bulbs of unusually high quality and of the best standard varieties. No better can be bought.

In yellow, Chrysolora, early and large; Cajanus, late and tall; Sophie Jaffe. In blues, Alex. von Humboldt, and the dark blue Darling. In white, Belle Chinoise, British Queen and Blanche Superbe; also Louise, in white and dark blue; La Tendresse is white, tinged yellow; Snowball is white, tinged blue. All at 20 cts . per doz., \$1. 25 per $100, \$ 10$ per 1,000 . 500 at 1,000 rate.

## ENGLISH IRIS

The English Irises are too little known. Like their cousins, the Spanish Irises, the bulbs can be handled dry, and also like them, they prefer an open situation and rather heavy and moist soil, though they will grow anywhere. The beautiful drawing by Mr. Valentine on this page well shows their beauty. The glorious flowers, much larger than the Spanish Irises, come in all shades, from blue to white, with many exquisite lavenders. Mixed bulbs all 50 cts . per doz., $\$ 1.75$ per 100.

## Two Other Good Irises

Iris ochroleuca, otherwise known as Iris oricntalis, is a truly noble plant, which stands 3 to 4 feet high, and bears large, cream-colored flowers. It will grow in any garden soil, and will do well at the water's edge. Strong plants, 25 cts each.

Iris Sibirica is almost unknown in Californian gardens, but well worth knowing. It forms strong masses not unlike the larger-growing wild Irises, and the fine, deep blue or white flowers are borne well above the leaves. They should have a rather moist soil and should not be disturbed often. Strong plants, 15 cts. each, $\$ 1.25$ per doz.


English Iris


Crocus-among the earliest to bloom

## Various Bulbs for Fall Planting

CROCUS are among the very earliest of spring flowers, and most pleasing either in pots or in the open ground. I have not seen them successfully naturalized in grass, but they do well mixed with tulips, Spanish irises or anything but narcissi. They make a pleasing ground-cover. I have extra-fine bulbs in white, striped, blue and purple, at 30 cts . per doz., \$r. 50 per 100.

IXIAS. These are small plants with very pretty flowers borne freely on long, slender stems. They come in shades of white, red, scarlet and yellow, and are excellent cut-flowers. They like a warm situation, good drainage, and prefer a light, warm soil. I make a mixture of ten fine varieties for 25 cts. per doz., \$I. 25 per 100.

MUSCARI, or GRAPE HYACINTHS. Heavenly Blue is the best of the Grape Hyacinths, the bluest of blues, and is a delightful little flower. I have a thousand of these dotting a slope with light green carpeting, and the result is exquisite. In smaller numbers, or in pots, they are just as fine. 25 cts . per doz.

Plumosus is the Plume Hyacinth and very different, with its odd purple flower more like a feather than a flower. 3 cts . each, 30 cts . per doz.

ORNITHOGALUM Arabicum is well worth growing. The stems are a foot or so high, rather stout, and bear a raceme of white flowers with strongly contrasting black centers. It forces or grows in the open. The bulbs are worth 5 cts .

SPARAXIS are cousins of the gladioli and ixias, with very bright flowers, and need the same culture as ixias. The common sorts are 8 inches to a foot high, and well worth growing. Of them I offer a very fine mixture at 20 cts . per doz., $\$_{1} .50$ per 100 .

EREMURUS Himalaicus is a striking plant, with large leaves something like an agapanthus, and a very stout stalk, growing 6 to 8 feet high, with many pure white flowers. The bulbs are large and cost \$r. 25 each.

TIGRIDIAS. I offer these in my Hardy Plant Catalogue for spring planting.
The war in Europe has delayed bulb shipments from Holland, but probably October 15 will see them here

## GLADIOLI FOR FALL PLANTING

## SMALL-FLOWERED EARLY SORTS

All of this class are most satisfactory for beds or for cutting. They should be planted by the hundreds. Words fail to tell how handsome they are, with their long spikes and richly colored flowers of white, red and pink. As I watch them unfold their beauties day after day, I naturally feel that I would like to have all my friends know and grow them.

Culture. They like light and loose soil, and demand plenty of water before and during blooming period, and to be dried off about a month after flowering. They can remain in the ground if reset every second or third year. The bulbs of the Bride, Nanus and Ramosus should be planted before Christmas.

The pure white Bride is the florist's standby and a splendid flower. Blushing Bride is pinkish and as good, while the exquisite little Na nus in its various shades of white and pink is simply delightful. Do not fail to buy some. Quite different is Ramosus, a much-branched species with richly marked flowers in shades of red, the spikes often 2 to 3 feet high, and splendid for large bouquets.

Bride and Blushing Bride, at the same price, 25 cts. per doz., \$r. 25 per roo; Nanus, mixed, is 40 cts. per doz., $\$ 2.50$ per roo; Ramosus is 50 cts. per doz., $\$ 3$ per 100 .

The Gladiolus is one of the finest flowers for cutting that I know of, and they are growing very popular for that purpose. If the spikes are cut when the first flowers open, they will keep for a week or more in water, and day by day the buds will open until the long stem is aglow.

## SUMMER FLOWERING

For these I refer you to my Hardy Plant Catalogue. I deliver in either spring or fall, but recommend spring planting.


Gladiolus nanus

## I ISSUE THE FOLLOWING CATALOGUES:

My book, "HARDY PERENNIALS FOR CALIFORNIA GARDENS," describes the Perennial Plants, California Ferns, and Bulbs for Spring Planting. This catalogue is issued in midwinter.
"BULBS AND WILD-FLOWER SEEDS OF CALIFORNIA" describes our native plants and bulbs, including Lilies. This list is issued every second year, in August.
"BULBS FOR FALL PLANTING" describes the Dutch Bulbs, Narcissi or Daffodils, Iris, Crocus, etc. Issued in September.

## Purdy's Fall Bulbs Carl Purdy URiah, California



